COMMENTS ON CALFED DRAFT PROGRAMMATIC EIS / EIR

The Association of California Water Agencies (ACWA) submits the following comments on the Draft CALFED Programmatic EIS / EIR.

WATER MANAGEMENT AND ECOSYSTEM ELEMENTS OF A SOLUTION

Assurances

The assurances package is a critical component of the CALFED program. Specific elements for assurances recommendations should include:

a. Habitat Conservation Plan (HCP) -- to establish restoration obligations and provide "no surprises" protection. The CALFED document should provide a strong commitment to habitat and water supply protection through development of an HCP.

b. A New Implementing Entity -- to coordinate operation of the new system. While the document cannot provide details about the entity, a commitment to its formation should be expressed.

c. Area of Origin Protections -- protective measures must be taken to meet current and future area-of-origin water needs

d. Permitting -- CALFED solution elements must move forward as one integrated package to ensure implementation of all elements. These linkages are critical to ensure the environmental, water quality and water supply needs are met in a balanced manner.

e. Consistency with State and Federal Programs -- to assure protection of water users while current statutes and regulatory programs are followed.

Ecosystem Program

The Ecosystem Restoration Program Plan (ERPP) is the principle environmental component of CALFED and is designed to guide the biggest environmental restoration initiative in history. The ERPP also provides an opportunity to develop a creative, collaborative dynamic among CALFED agencies and stakeholders. ACWA supports a strong environmental program as a part of a balanced and integrated CALFED package.

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Solution Principles -- Agricultural, urban and environmental stakeholders are working with CALFED to develop over-arching goals, structure and a work plan for this effort. The effort will be guided by:

a. An Ecosystem Strategic Plan -- to develop and implement a comprehensive, scientifically sound ecosystem strategy with clear objectives. Independent scientific review should be integrated into all program components.

b. Adherence to CALFED Principles -- in order to reduce conflicts in the system, be equitable, be affordable, be durable, be implementable and have no significant redirected impacts. Currently the document calls for substantial acquisition of privately held property in the Sacramento Valley and the Delta. The document should be revised to indicate that privately held land should be acquired from willing sellers only after all options for publicly held lands have been exhausted.

c. Certainty for Upstream Users -- to include in-delta and downstream users.

d. Science and Pragmatism -- to ensure the highest standards of scientific integrity are maintained while crafting an ecosystem program that is socially, economically and politically possible.

e. Getting Better Together -- in keeping with the 1994 Bay-Delta Accord to ensure the environmental program moves ahead in a balanced way with other CALFED program components.

f. Streamlining -- to reduce redundancy and duplication of effort regarding the management, operations and number of entities involved with implementation.

g. Focus on Endangered Species -- to achieve and support recovery of listed native species and avoid future listings.

h. Fish Priority -- to recovery the fishery.

Institutional Structure, Funding and Decision Making -- The ERPP must establish the means to implement the program effectively and efficiently. Greater clarity and accountability must be achieved through the following actions:

a. An Institutional Environmental Entity -- to develop an institutional entity, (sometimes referred to as Delta Environmental Restoration Agency (DERA)), capable of timely,

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responsive and cost-effective implementation of a large, complex ecosystem program based on adaptive management that allows stakeholder input and checks and balances.

b. Governance of the Entity -- to assure fair and equitable representation on its governing board, including proper federal, state and stakeholder participation.

c. Long-Term Funding -- to accomplish the rehabilitation and restoration goals, while promoting responsibility and accountability.

d. Linkage -- between the ecosystem program and other program elements must be maintained.

e. Dispute Resolution -- to be incorporated to include stakeholder participation.

f. Integration -- of all restoration efforts must not only be compatible, but combined with integrated efforts. We must assure commonality of goals, scientific data and techniques, decision making, implementation and monitoring.

3. *Environmental Water Use and Acquisition* -- This must be subject to the same rules as other transfers. Water acquisitions by the Entity should be made with clearly stated objectives and well-defined testing programs, research and monitoring to increase scientific understanding and ability to manage adaptively.

4. *Harvest and Hatcheries* -- Recovery of listed species and avoidance of future listings is a primary goal of the ERPP. Populations of selected species should be enhanced for sustainable commercial and recreational harvest and hatcheries must be managed appropriately.

5. *Land Acquisition for Habitat* -- To minimize the impact on agricultural lands, the Entity should first utilize publicly owned and idle lands along with shallow water habitat that is already available. Because of the sensitivity associated with the acquisition of private property, the Entity must make clear the objectives and environmental benefits which cannot otherwise be satisfied by the utilization of publicly owned property.

6. *Unscreened Diversions* -- Where technically feasible and cost effective, aggressive screening of diversions should be pursued.

7. *Contaminant Reduction* -- the Entity must support an enhanced, comprehensive monitoring program to identify the extent of toxicity in water and sediments throughout the watershed (Sacramento-San Joaquin watershed) to identify specific toxicants and to identify other adverse water quality impacts on beneficial uses, within the realm of existing regulatory authority.

8. *Exotic Species* -- The CALFED document must demonstrate an energetic research and monitoring program should be launched to better understand the effects of introduced species on the habitat and on native species.

Source Water Quality Improvement Actions

Increasingly stringent drinking water standards demand that high quality water be available to urban providers. We have identified the following key water quality issues:

Issues:

- Parameters of most concern include pathogens and disinfection byproducts along with salinity.
- The Delta is not a reliable source of high quality water.
- Regulatory requirements will continue to become more stringent.
- It will be technically difficult and increasingly costly to meet anticipated stringent drinking water regulations with Delta supplies.

Solution Principles -- A number of principles must be adhered to in any program including:

a. Maintaining and improving high quality source water

b. Protection of public health -- as the central component of the CALFED Bay-Delta Program

c. Phasing of in-Delta modifications -- initiated early in the implementation schedule to improve in-Delta and export water quality to the greatest extent possible.

d. Source control measures are needed -- to ensure improvement of water quality conditions in the central and south Delta.

e. Triggering of isolated component of a dual conveyance system -- to meet future regulations and sized to meet drinking water needs.

f. Maintain the common pool -- to improve water quality within the Delta.

Coordination with Other Programs -- Programs including in-Delta hydraulic improvements such as channel widening and setback levees that provide multiple benefits for water quality, habitat and flood conveyance should be implemented concurrently with source control measures.

Ecosystem restoration activities proposed in the Delta shold be evaluated to ensure net improvements in water quality. Likewise, operational criteria must be implemented taking water quality into account.

Water Use Efficiency and Recycling

ACWA strongly supports the common elements of the CALFED program including improvements to water use efficiency, consistent with AB 3616 and Urban Best Management Practices. ACWA concurs with the comments of the California Urban Water Agencies (CUWA) regarding water use efficiency.

Role of Water Use Efficiency -- ACWA supports CALFED efforts to both promote water use efficiency actions and provide assurances that existing water supplies and new water supplies are used efficiently. These actions, coupled with actions to increase available storage, can provide additional dry-year supplies and improve water supply reliability. While opportunities for water conservation and recycling exist in both the urban and agricultural sectors, impact on the Delta differs according to location within the system. We concur with CALFED on the point that implementation of water use efficiency actions will be primarily at the local and regional level.

a. Urban Water Conservation Efforts -- These activities should be guided by the existing MOU for Urban Water Conservation. Currently, $35 million per year is being invested in urban BMPs across California.

b. Proposed CALFED Urban Water Use Efficiency Support -- CALFED estimates 1.5 MAF of savings by year 2020 through the no action alternative. Additional efforts through the CALFED program are estimated to generate 0.74 MAF of savings. This will require considerable support and coordination among federal, state and local governments not currently practiced. CALFED estimates may greatly exceed the savings which can be justified locally and should not be used as conservation compliance targets. Costs and benefits of pursuing the savings and supply goals recommended for conservation and recycling must be consistent with other facets of the CALFED program. CALFED should provide supplemental funding for local projects where development of that water provides a statewide benefit. ACWA's support for this element is contingent upon acceptance of a final framework of this program and the overall CALFED solution.

c. Agricultural Water Conservation Efforts -- Agricultural water districts and farmers are engaged in a number of water conservation programs and projects. Efforts are contained within the 1992 Central Valley Project Improvement Act and AB 3616, which ushered in the Agricultural MOU. While CALFED is targeting 5.5 million acres to be part of the Ag MOU (currently 2.9 million acres are enrolled), this target is not realistic because many areas are not within any water district, so there would be no mechanism to enroll these levels and this estimate must be reexamined. It must be recognized that less than 9 million acres of California farmland are irrigated and of that total, several million acres are not served by any form of irrigation or water district. The MOU provides a voluntary mechanism for planning and implementing cost-effective efficient water management practices that benefit water suppliers. An agricultural water conservation program should be pursued in ways that do not negatively impact groundwater recharge programs. The programmatic overlap between the AB 3616 program and federal projects' conservation and management programs needs to be recognized.

Urban Water Recycling Efforts -- CALFED expects 1.4 MAF annually for recycling under the no action alternative, versus 0.5 MAF in production now. Expenditures would range from $6.3 billion - $16 billion. Substantial public subsidies would be required. CALFED should

more appropriately focus on removing regulatory impediments to project development and develop a realistic public investment strategy.

Water Transfers & Marketing

ACWA recognizes and supports the role of voluntary water transfers and exchanges among willing sellers and buyers and views them as an increasingly important component of water supply development and management in California. Voluntary transfers need to be considered in the economic and operational context of existing and new storage and conveyance facilities. However, physical and, to a lesser extent, institutional limitations constrain water transfers which rely on conveyance through and export from the Delta in years other than dry and critically dry years. Simply dealing with institutional or legal aspects of water transfers will not significantly reduce or eliminate the need for physical solutions in the CALFED Bay-Delta solution. It is currently impossible to ensure that access to conveyance capacity will be available for a transfer that would require movement of water every year.

Solution Principles -- ACWA supports the inclusion of voluntary water transfers and exchanges as a component of CALFED's overall package. The following objectives need to be included in any market:

a. Source area water supply assurances -- for water users and communities to ensure their concerns and third party impacts are addressed.

b. Streamlining the regulatory process -- to the maximum extent to encourage and facilitate timely transactions.

c. Protection of water rights for the transferring entity.

d. Area-of-origin protections -- through establishment of local public processes including public hearings.

e. Sufficient storage and conveyance capacity -- must exist to support investment in water transfers while protecting the financial integrity of the system. Optimum water market opportunities will depend on the appropriate combination of new and existing storage, groundwater storage, and conveyance facilities that do not currently exist.

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f. Operational flexibility to facilitate water transfers -- through identified additional conveyance and storage capacity.

g. Water transfers for environmental purposes -- which should be subject to the same rules as other transfers.

h. Establish a water transfer clearinghouse -- to facilitate the collection, analysis, and dissemination of information necessary to assess potential third party and source area groundwater impacts of various transfers.

I. Mitigate third-party impacts -- in accordance with state law.

Water Exchanges

ACWA strongly supports water exchanges as a mechanism to transport, store or otherwise optimize the efficient use of water at the local, regional and state levels. A process to facilitate water exchanges should be part of the CALFED package.

Watershed Management

ACWA strongly supports watershed management and recognizes that such a program must include restoration of forest habitats so that there can be improved water quantity and water quality from watersheds. Programs must also manage and reduce pollutant loads from urban and rural areas to improve water quality. CALFED's watershed program should provide coordination and efficiency measures to more effectively utilize resources, consistent with local watershed plans. New funding sources for watershed management programs should be identified as part of the CALFED solution. ACWA is recommending a number of early implementation actions, including:

- development of standard reporting and monitoring protocols for the Delta Watershed.
- development of coordinated funding cycles consistent with other CALFED ecosystem restoration activities.
- formation of an Interagency Watershed Advisory Team (IWAT).
- identification and elimination of "institutional " barriers to more effective watershed management and recommended methods to remove such barriers.

INTERIM IMPLEMENTATION ACTIONS FOR CALFED PROGRAM

Stage 1

Stage 1 of the CALFED program will provide the necessary foundation for implementation of a long-term solution. In order to be successful, this foundation must accomplish the following:

a. **Continue the Accord and extend the Accord protection to other affected water suppliers.** The Accord was intended to be a bridge between the Bay-Delta's chaotic past and its long-term future. We now know that CALFED is pursuing a staged approach, with the earliest action decisions targeted for 1999. In the interim, we must prevent a return to the status quo of chaos and conflict that has for decades stalled resolution of problems in the Delta.

Additionally, through the Vernalis Adaptive Management Program (VAMP) and Sacramento River settlements up-stream, water rights parties are now participating in implementing the flow requirements established by the 1994 Bay-Delta Accord and deserve the same certainty provided to the downstream exporters.

b. **Integrate implementation of the Accord and CVPIA.** We should utilize the CALFED Stage 1 program as an opportunity to ensure that the goals of the Central Valley Project Improvement Act (CVPIA) are implemented within the context of the Accord and the CALFED solution principles.

c. **Implement a significant Stage 1 habitat program.** The Stage 1 program must provide significant habitat improvements, the ability to learn from these initial programs, and the opportunity to demonstrate to adjacent landowners that these habitat programs can be implemented without adverse impacts on neighboring lands, water diversions or flood protection.

d. **Implement a robust Stage 1 program of investments in water programs.** CALFED must use a balanced program of conservation, transfers, recycling, water exchanges and storage. ACWA understands CALFED's commitment to water transfers, recycling and

conservation in the Stage 1 program. However, the CALFED position and commitment to storage is unclear. In order to assure broad support for the other program elements, there must be clear and unequivocal support for north-of-Delta surface storage and south-of-Delta conjunctive use.

With this complete package, we can implement CVPIA, the Accord and the first stage habitat programs. If any one element, including storage, is omitted or weak, then the total package will be ineffective.

e. **Delta management.** In addition to habitat restoration investments and management measures for fisheries, we need an acceptable package of south Delta facilities and operational rules. In order to meet the restrictions for when pumping can occur to protect fish, the state and federal projects need the ability to pump at a high rate and the flexibility to pump when fisheries entrainment impacts are lower.

With the delay of the decision on the isolated component until Stage 2, there is no other alternative to meeting the CALFED and Accord principles for exporters.We understand that this is a bottom line issue for the state to accept the concept of a staged implementation concept.

f. **Provide necessary funding**. In addition to current federal CALFED environmental restoration funding efforts, ACWA pledges to work with CALFED to develop a federal funding strategy for the elements of paragraph D (i.e., Madera Ranch Groundwater program, enlarged Shasta Dam and water recycling). We must also pursue a strategy to assist the Governor in achieving necessary state funding for Stage 1 investments.

Focus on long-term staging is critically important to ensure that a proper foundation is layed for the overall program implementation.

WATER SUPPLY IMPROVEMENT AND RELIABILITY

By the year 2020, the state's population will grow by over 42 percent, from about 33 million to over 47 million people. To meet these increasing demands, agricultural and urban water suppliers have been pursuing multi-faceted strategies including aggressive investment in water conservation, wastewater recycling and development of groundwater and surface storage to manage competing water supply and environmental needs. CALFED's document will have to provide increased reliability and facilitate the development of new water supplies.

As we conclude one of the wettest years on record with 170 percent of average rainfall, we must remember the extended drought period in our not-so-distant past. From 1987 to 1992, California's water supplies were stretched to the breaking point. This protracted drought coincided with adoption of increasingly stringent water quality regulations, and reallocation of water supplies from the federal Central Valley Project and Mono Lake. More recently, California has been told that it must curtail its use of water supplies from the Colorado River. Taken together these circumstances have significantly reduced California's total water supply by some two million acre-feet annually. Add to this reduction another 400,000 to 700,000 acre-feet, depending on the type of water year, needed to comply with listings for fish under the federal Endangered Species Act (ESA).

Aligning a decreasing water supply with a growing population demands that we make water supply improvements a high priority through the CALFED plan.

TECHNICAL ELEMENTS OF A SOLUTION -- INCREASED GROUNDWATER STORAGE

ACWA believes that CALFED should invest substantially in groundwater storage capacity and conjunctive use opportunities in both upstream and export areas. CALFED should consider a wide range of alternatives, integrate operations of new programs into existing surface and groundwater storage operations, and assure broad benefits for local and statewide interests for water users and the environment. Projects should be designed consistent with the following considerations.

Need for Groundwater Storage

1. Immediate Implementation -- to increase groundwater storage capacity as part of CALFED's early (1 to 3 years) and near-term (4 to 9 years) actions.

2. Program Variations -- Groundwater storage programs are highly flexible and can be developed among local interests, CALFED agencies and others for multiple purposes.

3. In the Sacramento Valley and other areas north of the Delta, focus should be on locally supported groundwater studies and pilot programs

Local Control

Groundwater storage projects should generally be locally sponsored and controlled with benefits outside the local area secured through appropriate contractual arrangements. Additionally, in its document, CALFED should pledge assistance to local government agencies with financing and technical support. Conjunctive use operations of surface and groundwater should be implemented in coordination with baseline information on local groundwater conditions. Monitoring must be implemented to assess groundwater conditions and to guide program changes where necessary.

Groundwater Storage in Export Areas

Projects located in export areas have the potential to generate local water supply benefits, dry year yield for other export water users, and to allow better management of delta pumping and flows for environmental purposes. Two possible project sites:

- Early (1-3 years) and near-term (4-9 years) implementation opportunities may exist in Kern County, east San Joaquin County and at the proposed Madera Ranch site.

Groundwater Storage in Sacramento Valley

Sacramento Valley groundwater storage projects may have some potential in certain years to generate water supply benefits for local water users and dry year yield for water users elsewhere.

1. Local interests must control any programs.
2. More data is needed on the potential scope of Sacramento Valley conjunctive use.
3. Pilot projects should be pursued.

Groundwater Storage in San Joaquin River Watershed

Locally sponsored and controlled projects in the San Joaquin River watershed have the potential to generate water supply benefits for the local water users, dry year yield for water users elsewhere, and can increase environmental flows in the San Joaquin River and its tributaries. Increased groundwater conjunctive use capability is a key implementation element of the Vernalis Adaptive Management Program (VAMP).

Groundwater Storage East of the Delta

Local interests must approve the development and scope of groundwater storage programs. State, federal or regional partnerships are also possible. Potential projects located east of the Delta also have the potential to generate water supply benefits for local water users and dry year yield for others and increase enviornmental flows for fishery requirements in east side tributaries. Projects available for early implementation (1 to 3 years) are located in the Mokelumne, Calaveras, Stanislaus and Farmington basins.

TECHNICAL ELEMENTS OF A SOLUTION -- INCREASED SURFACE STORAGE

The CALFED solution must provide for substantial new off-stream surface storage capacity to capture wet year water and to meet the water quality and supply needs of water users upstream of the Delta, within the Delta, and in export regions, and to provide for environmental protection and enhancement. System storage can also substantially improve the utility of groundwater basins.

New offstream storage projects will generate multiple benefits essential to achieve the CALFED goals. Sites should be evaluated on the multiple benefits they will provide, with cost as one but not the only determining factor.

General Considerations

1. *Location* -- Final location decisions must consider a range of factors, including environmental impacts and benefits, ability to meet water supply and water quality objectives and be cost-effectiveness.

2. *Water Allocation* -- water supplies generated by new storage should provide multiple benefits, including meeting specified environmental requirements and meeting water supply needs in the region where the storage site is located, as well as in other upstream areas, the Delta and export areas.

3. *Integrated Operation and Exchange Agreement* -- Existing and new storage facilities should be evaluated on the basis of integrated operations to maximize the potential benefits of an expanded system. Operational and exchange agreements should be developed to assure broad geographical benefits from storage investments.

4. *Phasing* -- ACWA believes pursuit of new surface storage should be pursued as soon as practicable.

New Surface Storage in the Sacramento Valley

Based on available information, the CALFED solution should include the construction of approximately 2 million acre-feet of new surface storage capacity in the Sacramento Valley. Considerations include:

1. *Early Implementation Opportunities* -- CALFED should consider early implementation of north-of-Delta storage which could be accomplished in the near-term (4-9 years)

2. *Sites Reservoir* -- Appears to be most cost-effective and environmentally protective of sites being considered north of the Delta. Up to 1.9 MAF of storage capacity; 300,000 to 450,000 a.f in annual yield; $900 million in capital costs; $60 million annually.

3. *Shasta Reservoir Enlargement* -- Up to 285,000 a.f. storage capacity; 50,000 to 70,000 a.f. in annual yield; $100 million in capital costs; $10 million annually; $200 a.f. cost.

4. *Area of Origin Considerations* -- A portion of the water supplies generated by new Sacramento Valley surface storage should be utilized to replace water lost to the Delta because of the diversion of water or implementation of projects that are developed to meet future area of origin water supply needs.

New Surface Storage Adjacent to Delta or in Export Area

The ability to store additional water adjacent to or south of the Delta during high flow periods for later use is critical to meet water supply, water quality, and environmental objectives. The document should identify sites totalling approximately 1 million acre-feet of new surface storage capacity located adjacent to the Delta or in the export regions.

Flood Control Considerations

In its document, CALFED must take into account the flood control impacts of its decisions and should include flood control benefits where possible. Improved flood control benefits should be

achieved through development of new storage, operational agreements, levee stabilization, and channel capacity improvements. CALFED action must consider:

1. Involvement of Local Interests -- Through a representative public process to provide all interests a significant role.

2. Comprehensive Planning -- To identify all "hard points," including diversion and fish screening facilities, infrastructure facilities, and necessary bank stabilization projects. Additionally, to assure that CALFED actions will fully address all adverse impacts on diversion capability and integrity of fish screen facilities.

3. Coordination of Flood Control Activities -- Through responsible local, state and federal agencies.

Storage / Conservation Cost Comparisons

California Urban Water Agencies have prepared a comparison between the costs for wastewater recycling / urban water conservation and possible storage scenarios. This information was provided to the Bay-Delta Advisory Council (BDAC) at its June meeting. Such comparisons must be part of the analysis in the draft preferred alternative document.

Wastewater Recycling:

Current level: 500,000 a.f. / year

CALFED Projected Additional Potential by 2020:

900,000 - 1,400,000 a.f. / year

Capital Cost: $6.3 billion - $16 billion (1)

Yield Cost: $900 - $1,200 a.f. delivered

Urban Water Conservation:

No Action Baseline by 2020: 870,000 a.f. / year

Additional CALFED actions: 1,480,000 a.f. / year

Yield Cost of Additional action: $400 - $1,600 a.f. / year (2)

By comparison (3):

New Off-Stream Storage:

Sites Reservoir

Storage Volume: 1.9 million a.f.

Annual Yield: 300,000 - 450,000 a.f. / year

Yield Cost: $130 - $200 / a.f.

Enlarged Shasta Reservoir:

Storage Volume: 285,000 a.f.

Annual Yield: 50,000 - 70,000 a.f.

Yield Cost: $140 - $200 / a.f.

(1) Based upon range of actual costs of three most recent large-scale recycling projects in San Diego, San Jose and West Basin MWD.

(2) CALFED Water Use Efficiency Technical Appendix page 5-3

(3) Ag-Urban Technical Group estimates

TECHNICAL ELEMENTS OF A SOLUTION -- DELTA FACILITIES AND OPERATING REQUIREMENTS

Delta Facilities

ACWA believes that any Delta conveyance component must protect fisheries, especially those species that are endangered, and provide source water quality sufficient to protect public health, all the while protecting water supply reliability and protecting upstream and in-Delta water users. We recognize that CALFED is not ready to make a commitment to a permanent solution in the Delta and will proceed in the interim with through-Delta conveyance options while studying options for long-term conveyance, using both through-Delta and isolated facility options. We have grave concerns as to whether fisheries and drinking water concerns can be satisfied with the through-Delta option and we believe the draft preferred alternative should certify an isolated facility as part of the EIR / EIS to keep that option available while testing through-Delta options. There should be a clear path and timeline for making a final decision on a permanent Delta conveyance solution.

Export Capabilities -- The CALFED Program must be consistent with the following:

a. Common Pool -- In its document CALFED must maintain its commitment to this principle under which the federal and state projects continue to rely on in-Delta conveyance and pumping to meet a portion of their long-term supply needs.

b. Maximum Flexibility -- By widely separating dual intakes for export pumping with diversion in the north Delta on the Sacramento River and in the south Delta. However, certain in-Delta improvements will be necessary in the near-term (4 to 9 years).

c. Total Export Capacity -- This capacity should be consistent with assurances that protect and provide for water quality, environmental objectives, and the water supply needs of both export and areas of origin.

In-Delta Improvements -- In its document, in-Delta improvements should be implemented as part of a CALFED package to improve habitat, flood conveyance, water quality and water

supply. Possible actions include those which will improve fisheries and fishery habitat within the Delta, improve operations and improve water quality.

Physical alterations could include setback levees, channel modifications and the development of tidally influenced shallow water habitat. All actions in the Delta should be coordinated with other elements of the entire solutions package to ensure maximum benefits and cost effectiveness.

Isolated Component of a Dual Conveyance System -- According to CALFED analysis, an isolated component of a dual conveyance system, in conjunction with through-Delta improvements and new storage appears necessary to achieve drinking water quality, water supply and fisheries objectives. This program component should be included in the package when and to the extent required to assure these benefits. This requires focusing on the conditions and assurances under which an isolated component of a dual conveyance system becomes necessary—specifically what conditions would trigger taking action on this component. ACWA also believes additional analysis is required before the size and timing of such a facility can be determined conclusively. Other considerations in order include:

a. Drinking Water Considerations -- in combination with through-Delta improvements to meet targets for source water quality and drinking water standards.

b. Biological Considerations -- based on habitat improvements and reduced entrainment.

c. Protection of In-Delta Uses -- water quality and supply implications for in-Delta uses resulting from timing and sizing options must be considered.

d. Water Transfer Considerations -- the timing and sizing of an isolated facility in combination with through-Delta improvements, storage and operating requirements should be considered to assure access to water transfers across the Delta in all water year types.

Water Quality Improvements of the Dual Conveyance System -- Such a system could provide water quality improvements to export water users while protecting water quality for in-Delta users. For in-Delta users, water quality can be protected through a combination of measures, including appropriate flows through the central Delta channels, in-Delta channel improvements,

stage / salinity structures in the south Delta and selected source water actions. For export users, technical analyses indicate that salinity and bromide levels can be substantially reduced.

Levee Maintenance and Stability -- Reliance on continued SWP and CVP pumping from the south Delta means all entities continue to have a stake in levee integrity. Issues related to levees include:

a. Funding
b. Coordination and Assurances
c. Research and Evaluation

Protection of In-Delta Uses -- Protecting in-Delta uses is especially important. The following should be included in a CALFED Program:

a. Recognize Existing Obligations
b. Improve North Bay Aqueduct Water Quality
c. Through-Delta Flows
d. Source Reduction
e. Salinity Control Structures

Early Implementation

To provide early benefits to the environment and water users, CALFED should consider early implementation (1 to 3 years) of improvements to the existing Delta water conveyance facilities. Early measures could include:

1. South Delta Improvements -- to include enlarging channels near Clifton Court Forebay and an additional intake at the northeast corner of the forebay.

2. Implement Joint Point of Diversion -- this would mean Banks and Tracy pumping plants would be treated as one with pumping allowed at both plants for the benefit of SWP and CVP. Though this approach has promise for both water supply and environmental benefits,

potential impacts which have been identified would need to be addressed prior to project implementation. To maximize benefits of a Joint Point of Diversion program, the proposed intertie between the California Aqueduct and the Delta Mendota Canal should be constructed. Current restrictions on the SWP wheeling of CVP water should be removed.

3. Other Early Implementation Items -- To meet East Bay Municipal Utility District's (EBMUD) need for a high quality dry-year water supply and create the potential for benefits for the environment and other agricultural and urban water users, EBMUD should continue to pursue implementation of its American River Project. A number of potential impacts and issues have been identified and will need to be addressed prior to implementation.

Operating Requirements

Operating requirements for the protection of Bay-Delta resources as well as in-Delta and export water uses are proposed as a means of providing protection for each of these uses. Operating criteria are as important as physical changes to the Delta system when attempting to provide both environmental and water supply benefits.

Key principles for the development of these protective experiments and operating requirements include: establishing linkages between ecosystem improvements and operational requirements. Operational requirements, or project operational limits, should be allowed to change once ecosystem improvements are in place and are demonstrating environmental benefits at lesser cost, consistent with adaptive management strategies.

Direct linkages should be established between operational requirements and other actions that reduce fish mortality. Operational requirements should not be based on surrogate requirements, because there is no direct linkage to ecosystem improvements.

The above mentioned principles would be applied to the operating requirements that follow:

1. North and South Delta Export Diversions -- ACWA proposes that export limits be set based on threshold levels of direct fish mortality for selected fishery stocks. These levels should beset to produce a long-term reduction in direct mortality as compared to those that have occurred since the state project has been operational. CALFED and stakeholder interests should cooperatively develop the specific requirements of north and south Delta operating requirements involving direct mortality thresholds and actions which allow compliance. This approach offers the opportunity for increased enivornmental benefits and water supply benefits, by reducing overall fish mortality.

ACWA agrees that the combination of a sound ecosystem plan, needed Delta conveyance improvements, and appropriately designed operating criteria will provide the most optimum opportunity to reduce indirect fish mortality that may be occurring in the system.

2. Delta Outflow / Western Delta Salinity Requirement -- Delta outflow is an important factor impacting environmental, water quality and water supply objectives. CALFED should take the following steps to verify the validity of X2 or other surrogates and review the benefits provided by habitat improvements as they impact or modify the science supporting X2. Steps include:

- evaluation of underlying science
- testing scientific hypotheses and protective experiments
- establishment of criteria and methods of meeting requirements

3. Outmigration Flows -- Operating criteria should provide adequate flows at Rio Vista or Freeport on the Sacramento River and at Vernalis on the San Joaquin River.

4. In-Delta Water Quality -- Operating criteria should provide water quality necessary to protect Delta agricultural and in-Delta M& I water users.

5. Drinking Water Quality -- Operating criteria should produce water quality that provides the best assurances that urban water providers will be able to successfully treat source waters to meet increasingly stringent drinking water standards.

6. Total Dissolved Solids -- Revised project operations should provide export interests with water having TDS levels better than or equal to a 220 mg/L target on a quarterly running average period.

7. Suisun Marsh -- Requirements should be the same as those contained in the 1985 Water Quality Control Plan.

8. Delta Cross Channel Gates -- If a dual diversion system is in operation, the gates should be closed from November 1 through June 15.

Monitoring Plan

A comprehensive monitoring plan should be developed and implemented to provide a means of measuring the effectiveness of the operating criteria as well as measuring the success of ecosystem improvements.

Conclusion

In conclusion, ACWA recommends that CALFED's revised draft EIS / EIR document incorporate the comments contained herein.

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